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| 10/565,715 | 06/12/2006 | Luis Alfredo Diaz Chavez | 22080002 | 7944 |

7590 06/07/2011
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| EXAMINER |
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LEE, REBECCA Y

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| ART UNIT | PAPER NUMBER |
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1734

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06/07/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/565,715 | Applicant(s) CHAVEZ ET AL. | |
| | Examiner REBECCA LEE | Art Unit 1734 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-11 and 13-21 is/are pending in the application.
- 4a) Of the above claim(s) 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-11 and 13-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02/21/11, 02/22/11</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/22/11 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8-11 and 13-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Langelin (DE 4302539).

Langelin discloses a Ca(OH)_2 slurry, which is a particular case of calcium-magnesian aqueous suspension (with $x=1$, $y=0$ in claims 11 and 18), with a solid content of more than 60% by weight, and a viscosity of less than 1200 cps (1.2 Pa.s)(abstract). Langelin further teaches in one embodiment, the specific surface area of the solid is $9 \text{ m}^2/\text{g}$ (Page 3 of description, paragraph 16).

Langelin does not expressly teach the claimed specific surface area or the particle size of the solid. However, it is well held that discovering an optimum value of a result effective variable requires only routine skill in the art MPEP 2144.05 II. In the instant case, the specific surface area, which is affected by the particle size of the solid is a result effective variable since Langelin teaches a lower specific area is desired in order to decrease the viscosity of the slurry (Page 1 of description, paragraph 4). Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to have optimized the particle size and the specific surface area of Langelin, including the claimed particle size of less than or equal to 20 or 5 microns, and the claimed specific surface area of less than or equal to $5 \text{ m}^2/\text{g}$, in order to achieve desired viscosity.

Response to Arguments

Applicant's arguments filed 02/22/11 have been fully considered but they are not persuasive.

In response to applicant's request for further clarification of the statement in the previous action "However, even though BET specific area is different from the Blaine specific surface area, reducing the Blaine surface area would also result in a decreasing in the BET specific area"; and argument that variation in Blaine specific area will not lead to a variation of BET area, however, as discussed previously and admitted by applicant, Blaine specific surface is related to only external surface area, and thus different from BET surface area, since BET surface area accounts for both internal and external surface area. Therefore, the variation in the external surface area (Blaine

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surface area) would affect, at least partially, the BET specific area, i.e., decreases in Blaine surface area (external) would result in a decrease in BET specific area.

Applicant again referred to the Declaration filed 04/29/10 to show that the suspension of Langelin does not have the claimed properties. However, such Declaration was filed in response to the Huege reference, and the rejections based on Huege et al. had been withdrawn accordingly. Since no comparison data for Langelin has been provided, applicant's argument is not found convincing.

Applicant also argues that there is no motivation to vary the surface area in order to maximize the viscosity. However, as stated above, the specific surface area, which is affected by the particle size of the solid is a result effective variable since Langelin teaches a lower specific area is desired in order to decrease the viscosity of the slurry (Page 1 of description, paragraph 4). Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to have optimized the particle size and the specific surface area of Langelin, including the claimed particle size of less than or equal to 20 or 5 microns, and the claimed specific surface area of less than or equal to 5 m²/g, in order to achieve desired viscosity. Since applicant has not provided any factual evidence to show that the claimed surface area or viscosity would have in fact result in unexpected properties of the suspension, applicant's argument is not found convincing.

In response to applicant's argument that Langelin has different concerns from instant invention, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for

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patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). In the instant case, as stated above, the specific surface area, which is affected by the particle size of the solid is a result effective variable since Langelin teaches a lower specific area is desired in order to decrease the viscosity of the slurry (Page 1 of description, paragraph 4). Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to have optimized the particle size and the specific surface area of Langelin, including the claimed particle size of less than or equal to 20 or 5 microns, and the claimed specific surface area of less than or equal to 5 m²/g, in order to achieve desired viscosity. Since applicant has not provided any factual evidence to show that the claimed surface area or viscosity would have in fact result in unexpected properties of the suspension, applicant's argument is not found convincing.

Applicant again argues that the particle size of Langelin does not link to the BET surface area. Again, since the particle size affects the external surface area, and BET surface area accounts for both internal and external surface area. Therefore, the variation in the external surface area (Blaine surface area) would affect, at least partially, the BET specific area, i.e., decreases in Blaine surface area (external) would result in a decrease in BET specific area.

Applicant again argues that optimization in Lingelin would not reach instant invention. However, as stated above, the specific surface area, which is affected by the particle size of the solid is a result effective variable since Langelin teaches a lower specific area is desired in order to decrease the viscosity of the slurry (Page 1 of

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description, paragraph 4). Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to have optimized the particle size and the specific surface area of Langelin, including the claimed particle size of less than or equal to 20 or 5 microns, and the claimed specific surface area of less than or equal to 5 m²/g, in order to achieve desired viscosity. Since applicant has not provided any factual evidence to show that optimizing the surface area or particle size in Lingelin would lead to a viscosity beyond the claimed range, or the claimed surface area or viscosity would have in fact result in unexpected properties of the suspension, applicant's argument is not found convincing.

Conclusion

All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to REBECCA LEE whose telephone number is (571)270-5856. The examiner can normally be reached on Monday-Friday 8:00 am - 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, EMILY M. LE can be reached on (571)272-0903. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. L./
Examiner, Art Unit 1734

/Emily M Le/
Supervisory Patent Examiner, Art Unit 1734